Acadgild

Full-stack Web Development

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Agenda

1. What are Conditional Statements?
2. If Statement
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4. If else if Statement
5. Switch Statement
6. What are loops?
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What are Conditional Statements?

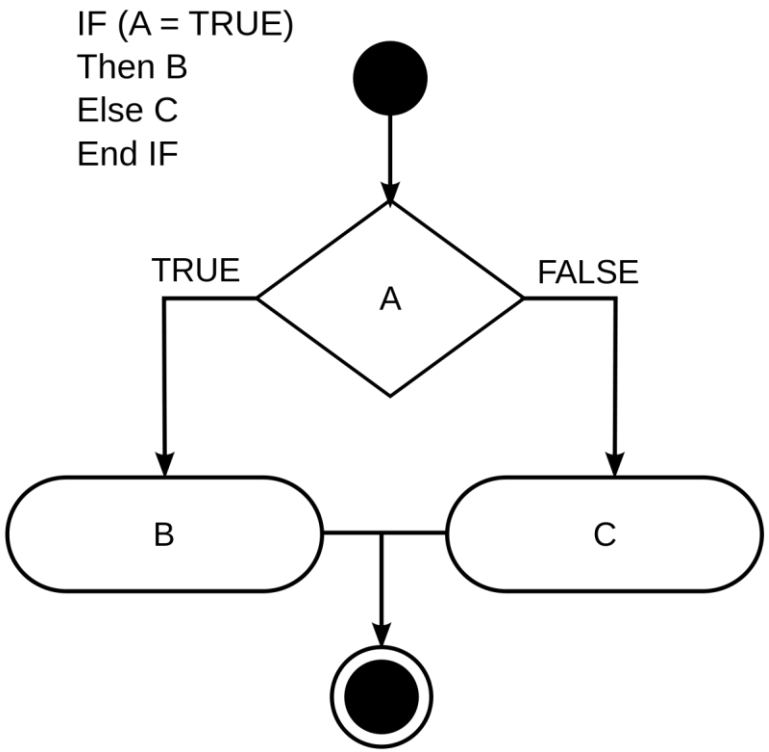
Conditional statements are used to perform different actions based on different conditions.

JavaScript supports the following conditional statements

- **if**
- **if else**
- **if else if**
- **switch**

If Statement

Used to specify a block of JavaScript code to be executed **if a condition is true.**



If Statement

- Syntax

```
if (condition) {
    block of code to be executed if the condition is true
}
```

- Example

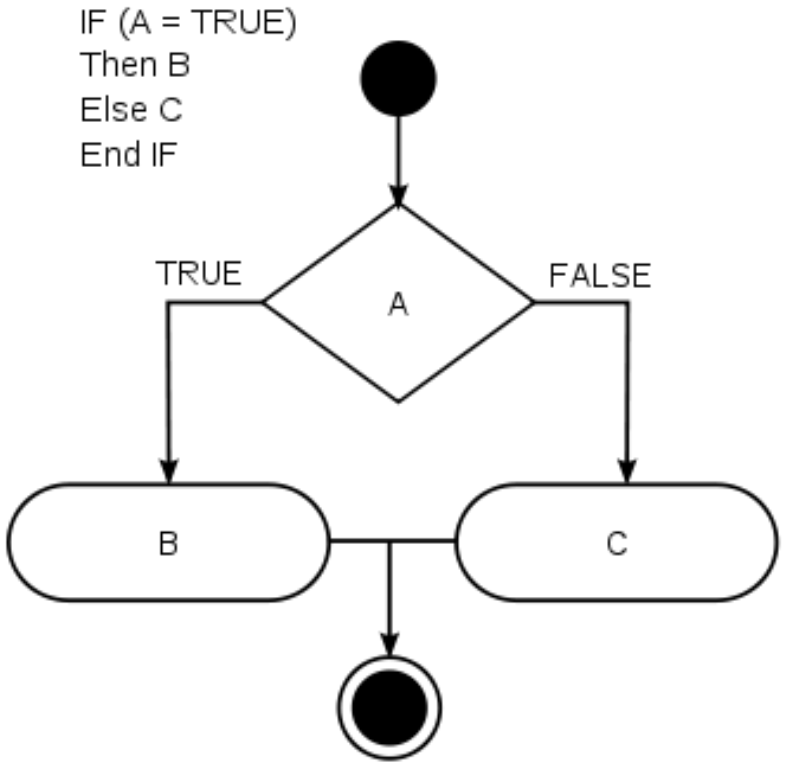
```
<script>
    var age = 12;
    var canVote;
    if (hour < 18) {
        canVote = false;
    }
</script>
```

If else Statement (cont)

Used to specify

one block of JavaScript code to be executed **if a condition is true** and

another block of JavaScript code to be executed **if a condition is false**



If else Statement (cont)

- Syntax

```
if (condition) {
    block of code to be executed if the condition is true
} else {
   block of code to be executed if the condition is false
}
```

- Example

```
<script>
    var age = 12;
    var canVote;
    if (hour < 18) {
        canVote = false;
    } else {
        canVote = true;
    }
</script>
```

If else if Statement

- An advanced form of **if…else**
- Used to specify multiple mutually exclusive conditions
- Syntax

```
if (condition1) {
    block of code to be executed if condition1 is true
} else if (condition2) {
    block of code to be executed if the condition1 is false and condition2 is
true
} else {
    block of code to be executed if the condition1 is false and condition2 is
false
}
```

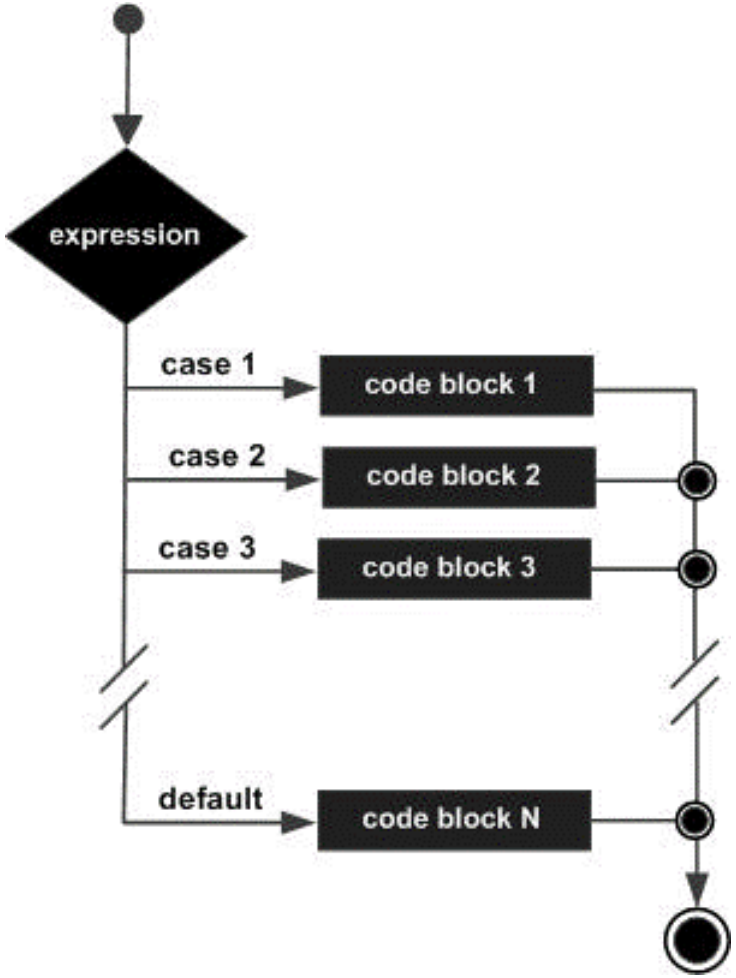
If else if Statement (cont.)

- Example

```
<script>
    var num1 = 10, num2 = 5, num3 = 1;
    if (num1 > num2 && num1 > num3) {
        alert(num1 + " is greatest number");
    }
    else if (num2 > num1 && num2 > num3) {
        alert(num2 + " is greatest number");
    }
    else {
        alert(num3 + " is greatest number");
    }
</script>
```

Switch Statement

- Used to specify **multiple conditional branches**
- Evaluates an **expression** and executes code as a result of a matching case
- An elegant alternative to several if…else...if statements



Switch statement (cont.)

- Syntax

```
switch(expression) {
    case n:
        code block
        break;
    case m:
        code block
        break;
    default:
        code block
}
```

Switch statement (cont.)

```
<script>
    var dayName;
    var day = 5;
    switch (day) {
    case 1: dayName = "Monday";
    break;
    case 2: dayName = "Tuesday";
    break;
    case 3: dayName = "Wednesday";
    break;
    case 4: dayName = "Thursday";
    break;
    case 5: dayName = "Friday";
    break;
    case 6: dayName = "Saturday";
    break;
    case 7: dayName = "Sunday";
    break;
    default:
    dayName = "Invalid day";
    }
    console.log(dayName);
    </script>
```

What are Loops?

Used to execute the same block of code a **specified number of times or while a specified condition is true**

JavaScript supports different kinds of loops:

- **for**
- **for..in**
- **while**
- **do..while**

For Loop

- Can execute a block of code a number of times
- Syntax

```
for (loop init; test; increment/decrement) {
    code block to be executed
}
```

- three important parts:
  - **loop initialization**
  - **test statement**
  - **increment/decrement expression**
- Example

```
<script>
    for (var count = 1; count <= 10; count++) {
        console.log("Current Count : " + count);
    }
</script>
```

For/in Loop

- Used to loop through an object's properties
- Syntax

```
for (var variableName in object){
   statement or block to execute
}
```

- On each iteration, one property from **object** is assigned to **variableName** and loop continues till all the properties of the object are iterated.
- Example

```
<script>
    for (var propertyName in document) {
        console.log(propertyName);
    }
</script>
```

While Loop

- Used to execute a statement or code block repeatedly as long as an **expression** is true
- loop terminates once the expression becomes **false**
- Syntax

```
while (expression){
   Statement(s) to be executed if expression is true
}
```

- Examples

```
<script>
    var count = 1;
    while (count <= 10) {
        console.log("Current Count : " + count);
        count++;
}
</script>
```

Do.while Loop

- Similar to the **while** loop except that the condition check happens at the end of the loop
- Executed at least once even if the condition is false
- Syntax

```
do {
   Statement(s) to be executed;
} while (expression);
```

- Example

```
<script>
    var count = 1;
    do {
        console.log("Current Count : " + count);
        count++;
    } while (count <= 5);
</script>
```

Loop Control Statements

- Used to control the loop execution like starting next iteration early to exiting the loop
- JavaScript provides **break** and **continue** statements

Break Statement

- Used to exit a loop early, breaking out of the enclosing curly braces
- break is also used in switch statement

- Example

```
<script>
    var counter = 1;
    while (counter < 20) {
        if (counter == 6.5) {
            console.log("breaking loop");
            break; // breaks out of loop completely
        }
        counter += .5;
        console.log(counter);
    }
</script>
```

Continue Statement

- breaks one iteration
- Immediately starts the next iteration of the loop and skip the remaining code block
- Example

```
<script>
    for (var i = 20; i < 40; i++) {
        if (i === 30) { continue; }
        console.log(i);
    }
</script>
```

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